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**NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER**

BASIC
IMAGERY
INTERPRETATION
REPORT

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**BARREIRA DO INFERNO
ROCKET RANGE (S)**

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**MISSILE RANGES: STRATEGIC SSM SPACE FACILITIES
BRAZIL
APRIL 1979**

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INSTALLATION OR ACTIVITY NAME					COUNTRY
Barreira do Inferno Rocket Range					BR
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	05-55-00S 035-09-00W				
MAP REFERENCE					
JOG. Series 1501, Sheet SB 25-5, 1st ed, Jan 76, scale 1:250,000 (Distribution Limited)					
LATEST IMAGERY USED			NEGATION DATE (If required)		
NA			NA		

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ABSTRACT

1. (TSR) Barreira do Inferno Rocket Range, from which both foreign- and domestic-built sounding rockets have been launched, is the major rocket range in Brazil. At present the SONDA III rocket, a Brazilian-made solid-propellant sounding rocket, is being tested at the range. The range consists of a launch area, a launch support area, a propellant storage area, a command and control area, and tracking facilities.

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2. (TSR) This is the first Basic Imagery Interpretation Report for the Barreira do Inferno Rocket Range. This report includes a location map, five annotated photographs, and significant mensural data.

INTRODUCTION

3. (TSR) Barreira do Inferno Rocket Range (Figure 1), approximately 8 nautical miles south-southeast of the city of Natal, is the major rocket launch range in Brazil. This civilian rocket range is operated by the Brazilian Air Force under the auspices of the National Commission for Space Activities—Comissao Nacional de Atividades Espaciais (CNAE).¹

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4. (TSR) The rocket range was built in 1965 by the CNAE. Since that time foreign- and domestic-built sounding rockets, including the Nike-Ajax, Nike-Cajun, Nike-Iroquois, Javelin, Aerobee, and Black Brant IV, have been launched from this facility.¹ The Brazilian-made SONDA III sounding rocket is currently being tested at the range.² In 1979 Barreira do Inferno Rocket Range will participate in monitoring and transmitting data on the European-made Ariane missile to be launched from Kourou Space Center-Launch Areas French Guiana.²

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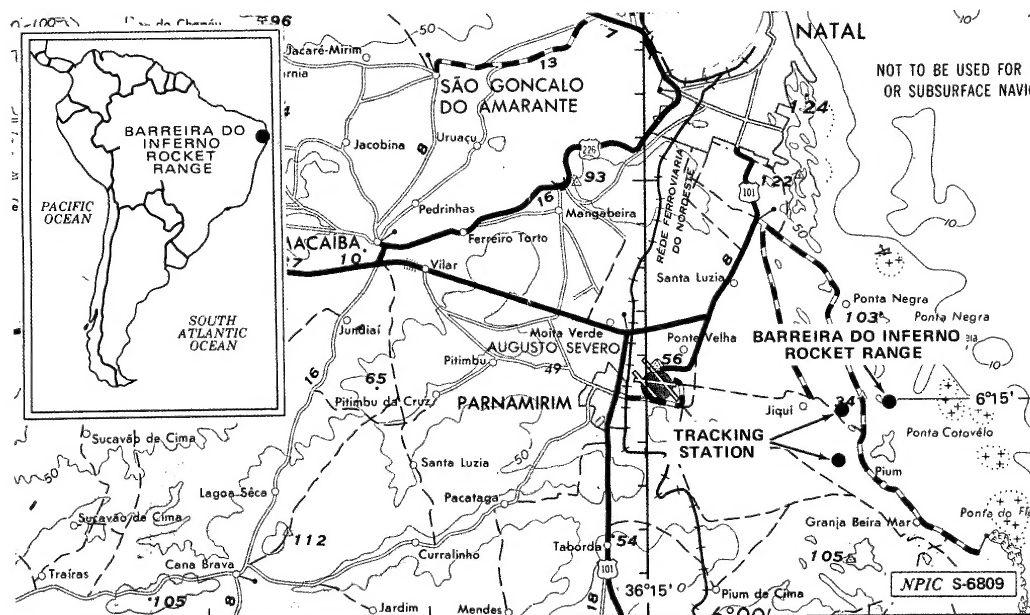


FIGURE 1. LOCATION OF BARREIRA DO INFERNO ROCKET RANGE, BRAZIL

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BASIC DESCRIPTION

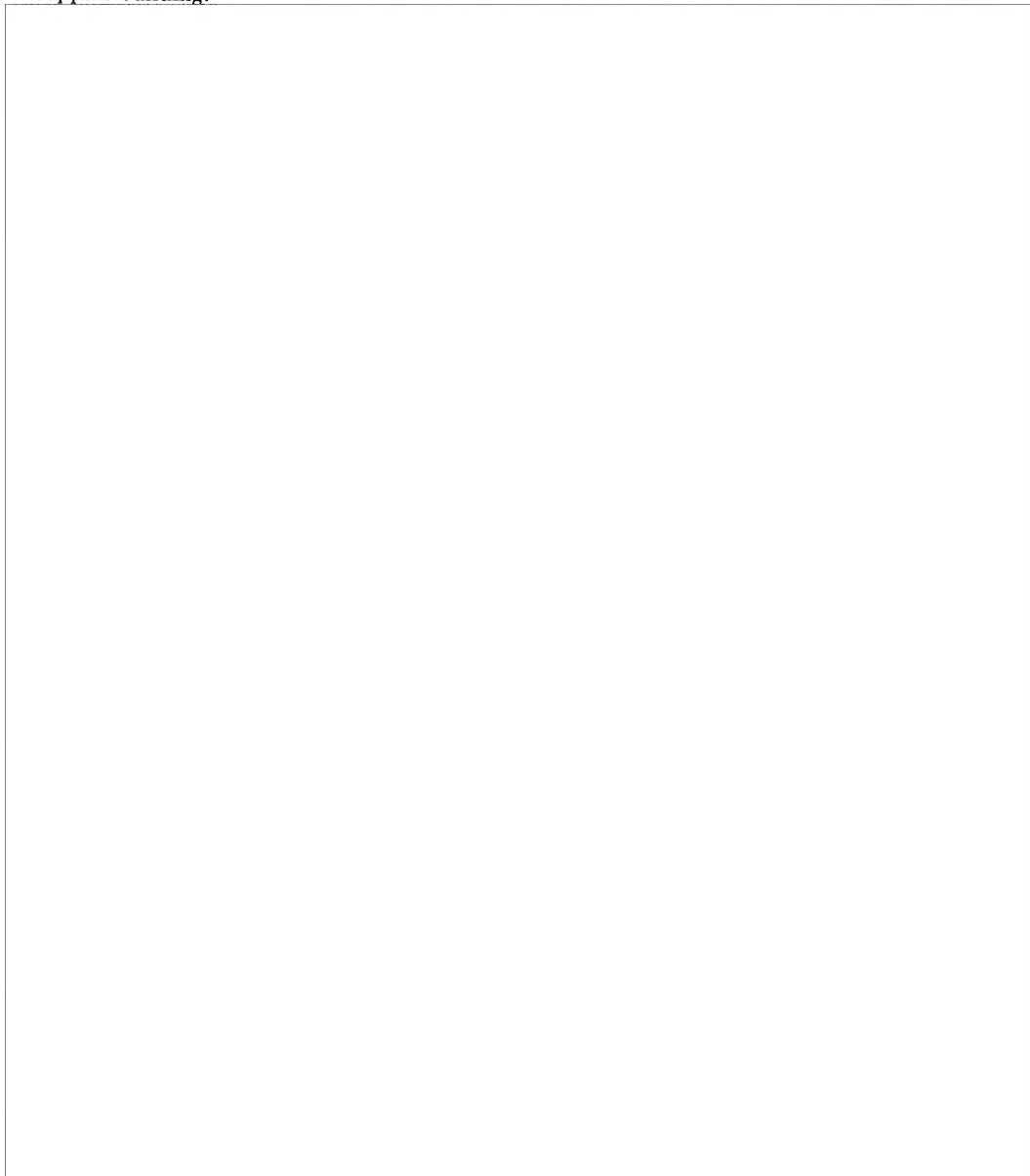
5. (TSR) Barreira do Inferno Rocket Range (Figure 2), situated along the Atlantic Ocean, consists of a launch area, a launch support area, a propellant storage area, a command and control area, a support area, and tracking facilities (the southwestern tracking facility, approximately 3.5 kilometers southwest of the launch area, is not shown on graphic). Horizontal dimensions provided in this report are accurate within plus or minus [] plus 1 percent of the measured distance) and vertical dimensions to within plus or minus [] plus 1 percent of the measured distance), both at a 95-percent confidence level. 25X1 25X1

Launch Area

6. (TSR) The launch area (Figure 3), in the northeast section of the facility, consists of five circular concrete launch pads (ranging in diameter from [] with an asphalt road around the circumference of each launch pad, an Aerobee launch tower, a circular command and control building (blockhouse), a meteorological tower, and a helium supply station.³ Four of the launch pads have missile launch rails. 25X1

Launch Support Area

7. (TSR) The launch support area (Figure 4 and Table 1), approximately 225 meters south of the launch area, consists of a payload preparation building, a vehicle preparation building, and a support building.³



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Top Secret RUFF SPOKE**Propellant Storage Area**

8. (TSR) The propellant storage area (Figure 4 and Table 1), approximately 375 meters south of the launch area, consists of three partially bunkered storage buildings (a solid-propellant storage building, a liquid-oxidizer storage building, and a liquid-propellant storage building).³ A looped road serves the propellant storage area.

Command and Control Area

9. (TSR) The command and control area (Figure 4 and Table 1), approximately 325 meters southwest of the launch area, consists of two administration buildings, two meteorological buildings (one with a radome on the roof), a control building, a communication/supply building, a lounge, a quarters building, a generator building, two support buildings, and a helicopter pad.³

Support Area

10. (TSR) The support area (Figure 4 and Table 1), approximately 540 meters southwest of the launch area, consists of four quarters buildings, a restaurant, a lounge, a supply/maintenance building, a service station, a garage, an optical tracking building with two adjacent support buildings, three support buildings, and an instrumentation site (radiant).³

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11. (TSR) The rocket range includes three tracking facilities. One tracking site is on the southern edge of the support area, approximately 550 meters south-southwest of the launch area; another site is approximately 2.5 kilometers west of the launch area; and the third is approximately 3.5 kilometers southwest of the launch area.

12. (TSR) The tracking facility in the support area consists of an optical tracking building (Baker-Nunn camera facility) and two small support buildings (items 19–21, Figure 4 and Table 1).³ Adjoining the optical tracking building is a [] framework for a portion of the roof to slide onto.

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13. (TSR) Significant items observed at the western tracking facility (Figure 5), at 05-55-26S 035-10-24W, include two large support buildings and a [] parabolic dish

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*Table 1. Support Facilities, Barreira do Inferno Rocket Range
(Keyed to Figure 4)*

This table in its entirety is classified TOP SECRET RUFF

Item	Description ³	Dimensions (m)			Roof Cover (sq m)
		L	W	H	
Launch Support Area					
1	Support bldg				
2	Payload preparation bldg				
3	Vehicle preparation bldg				
Propellant Storage Area					
4	Solid-propellant storage bldg				
5	Liquid-oxidizer storage bldg				
6	Liquid-propellant storage bldg				
Command and Control Area					
7	Generator bldg				
8	Quarters				
9	Lounge				
10	Control bldg				
11	Communication/supply bldg				
12	Admin bldg				
13	Meteorological bldg*				
14	Meteorological bldg with radome				
15	Admin bldg				
16	Support bldg*				
17	Support bldg				
Support Area					
18	Support bldg*				
19	Support bldg				
20	Optical tracking bldg (Baker- Nunn camera fac) and framework				
21	Support bldg*				
22	Quarters				
23	Lounge				
24	Quarters				
25	Quarters				
26	Restaurant*				
27	Supply/maintenance bldg				
28	Support bldg				
29	Service station*				
30	Quarters				
31	Garage				
32	Support bldg*				
33	Instrumentation site (radiant)				
Total					

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* Dimensions given are at widest point.

** Height obscured by vegetation.

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antenna mounted [] parabolic dish antenna is mounted on the roof of one of the large support buildings. 25X1

14. (TSR) The southwestern tracking facility (Figure 6), at 05-56-19S 035-10-47W, consists of two support buildings and a [] parabolic dish antenna mounted on a [] meter-high pedestal. 25X1



REFERENCES

IMAGERY

(TSR) KEYHOLE imagery acquired on [] was used in the preparation of this report. 25X1

MAPS OR CHARTS

JOG. Series 1501, Sheet SB 25-5, 1st ed, Jan 76, scale 1:250,000 (Distribution Limited)

DOCUMENTS

1. CIA. FMSAC-STIR/SC/71-1, SC No 09106/71 *Scientific and Technical Intelligence Report, Foreign Free-World Missile and Rocket Ranges*, Jan 71 (SECRET []) 25X1
2. DoD. IR 6 809 0382 77, (U) *Barreira do Inferno Continues a Reduced Pace of Meteorological Missile Firings*, 4 Oct 77 (CONFIDENTIAL)
3. DoD. IR 1 502 0235 69, (U) *Barreira do Inferno Rocket Range, Natal, Brazil*, 7 May 69 (CONFIDENTIAL []) 25X1

REQUIREMENT

COMIREX P01

Project 290002DP

(S) Comments and queries regarding this report are welcome. They may be directed to [] Regional Analysis Division, Imagery Exploitation Group, NPIC, [] 25X1
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